SOCIAL STRUCTURE AND PSYCHIATRIC DISORDERS [1]

F. C. REDLICH, M.D., A. B. HOLLINGSHEAD, PH.D., B. H. ROBERTS, M.D.,
H. A. ROBINSON, PH.D., L. Z. FREEDMAN, M.D., J. K. MYERS, PH.D.
NEW HAVEN, CONN.

This is a preliminary report of a research project [2] dealing with the relationship of social structure to psychiatric disorder.

The primary assumption was the existence of a significant relationship between social status position and psychiatric disorders. More specifically, our main hypotheses were that (1) the prevalence of psychiatric disorders is significantly related to the social status position of the patients; (2) (diagnostic) types of disorders in psychiatric patients are significantly related to social status position; (3) types of psychiatric treatment are significantly related to social status position of the patients; (4) the psychodynamics of behavior disorders are related significantly to social status position; and (5) social mobility in the status structure is related to psychiatric disorder. These interlocking (and to some extent interdependent) hypotheses involve examinations of the relationship of psychiatric disorders and the social stratification of the community.

Our knowledge of social stratification rests on the investigations of Warner and associates(14), Hollingshead(6, 7), and others. No psychiatric literature on our topic exists, with the exception of Ruesch's(12, 13) contributions, Dollard and Miller's(2) recognition of the problem, and casual references, amongst others by S. Freud, of the importance of social class for psychiatric etiology and phenomenology. Also, various epidemiological studies by Faris and Dunham(4), Lemkau(10), Malzberg(11), Dayton(1), and Hyde(8, 9) relate single socio-economic criteria to the incidence of psychiatric disorders. The scheme of social stratification used in our study is that of Hollingshead. His Index of Social Position utilizes 3 factors: (1) occupation, (2) education, and (3) ecological area of residence. Each factor is scaled and assigned a weight determined by a standard regression equation. The combined scores group themselves into 5 clusters (social strata or levels) and to each of these a numerical index is assigned. A brief and general descriptive characterization of each of these social levels follows:

LEVEL I—(the highest socio-economic position) comprises families of wealth, education, and top-rank social prestige.

LEVEL II—consists of families in which the adults for the most part hold college or advanced degrees, and are in professional or high-level managerial positions.

LEVEL III—includes proprietors, the bulk of small business people, white-collar, and skilled workers; this group consists predominantly of high school graduates.

LEVEL IV—consists largely of semi-skilled workers and laborers, with an educational index below the secondary level.

LEVEL V—includes unskilled and semi-skilled workers, who have an elementary education or less, and who live in the poorest areas of the community.

The project is being carried out in the metropolitan area of New Haven, Connecticut. It consists of 4 successive studies: (1) a census of psychiatric patients herein referred to as the Psychiatric Census; (2) the social stratification of a 5% random sample of families in the same area; (3) a case study consisting of the comparison of a group of neurotic and psychotic patients belonging to social levels III and V; and (4) an intensive study of the psychodynamics of a few cases belonging to different social levels. The current report deals with experiences and results obtained in the Psychiatric Census, and the 5% sample of controls.

The Psychiatric Census was limited to residents of the New Haven metropolitan

[1] Read at the 108th annual meeting of The American Psychiatric Association, Atlantic City, N. J., May 12-16, 1952.

From the Yale University Departments of Psychiatry and Sociology, aided by USPHS Mental Health Act grant MH 263 (R), "Relationship of Psychiatric Disorders to Social Structure."

[2] In the spring of 1949, Redlich, Hollingshead, and Gruenberg made plans to investigate this problem. Gruenberg moved to another community and Hollingshead and Redlich then formulated the project. The following investigators were added to the research team: B. H. Roberts, L. Z. Freedman, psychiatrists; J. K. Myers, sociologist; H. A. Robinson, psychologist; and W. Caudill, anthropologist, who participated in the early phases of the investigation.

area with a population of about 250,000 in 1950. A systematic attempt was made to isolate and to acquire data for all individuals legally residing in this area who were psychiatric patients on December 1, 1950. A psychiatric patient is defined by us as a person in professional contact with a psychiatrist; *i.e.*, a person who is seeing and/or obtaining help and care from a psychiatrist, regardless of whether this contact is for diagnostic or therapeutic purposes, whether it is voluntary or obligatory. The research team obtained the cooperation of all public and private psychiatric institutions and clinics in Connecticut and nearby states, and of all private psychiatric practitioners in Connecticut and in the metropolitan New York area. In addition, contact was made with well-known clinics throughout the country. The response was highly gratifying; all institutions and clinics cooperated, as did over 95% of the private practitioners. It can reasonably be assumed, then, that a very high proportion of the total sample of psychiatric patients was obtained.

At this point we would like to emphasize strongly—to avoid any errors of interpretation—that this study is not dealing with psychiatric disorders prevailing in the population at large. It is merely a sample—and nearly a total sample—of the population of psychiatric patients *according to our definition*. In other words, we are primarily exploring the relationship of social structure to certain aspects of current psychiatric practice. In the general population, clearly, there are many persons with psychiatric problems who are seeking help in other ways and, unfortunately, many who are without the benefit of any therapeutic intervention. To date, the true prevalence and incidence of psychiatric disorders in the general population is unknown. As such knowledge would be of utmost importance for both psychiatry and public health, we strongly favor such a study. In light of the results from such a study, many data of our own study would become more meaningful.

For every patient in the New Haven area, the research team of psychiatrists and sociologists obtained information on 44 items relating to their social status and psychiatric condition—sociologists worked on sociological items, while psychiatrists independently gathered psychiatric data. These items had been carefully defined and organized into a schedule. Case records were relied upon for institutional and clinic patients; data on private patients were obtained by interview with the psychiatrist. Records of 1,589 institutional and clinic patients were abstracted and 374 private practitioners' cases were obtained by interview, for a total sample of 1,963 cases. After the field work was completed, the schedules were edited, coded, and the data punched on I.B.M. cards for analysis.

The census data comprise psychiatric symptomatology and diagnosis; duration and onset of illness; referral to the practitioner and institution; nature and intensity of treatment; as well as sociological data, such as occupation, education, ethnicity of patient, religion, parents, siblings, children, and spouse. Our diagnostic classification is based on the Veterans Administration nomenclature; the number of categories in this scheme was somewhat reduced to eliminate classifications that were poorly defined, or in this population were not found in statistically significant numbers. The diagnoses were based on data from family and personal history, behavior status, and course of illness. By doing this a uniform diagnostic approach was ensured and the error of accepting diagnoses depending on the viewpoint of the individual institutions and practitioners was avoided. Ninety-five percent of our own diagnoses were identical with the diagnosis of the psychiatric record. The reliability of our data-gathering technique was independently tested and found to be adequate.

Brief Survey of Findings

Before dealing with the principal hypotheses, a brief over-all survey of the census data is given. Of the 1,963 cases of the census study, 50.7% were males, 49.3% were females. The diagnostic distribution of the total group is presented in Table 1, and the age distribution in Table 2.

The low percentage of children and adolescents in contact with psychiatrists is remarkable. New Haven has 2 child psychiatric clinics and a comparatively high number of private practitioners of psychiatry—a number of them working with children, though none exclusively. The low percentage

of patients under 18 years of age may relate, among other possible factors, (1) to the difficulties that practitioners have in finding parents who can afford psychiatric treatment for their children, or to the unwillingness of parents to support long-term treatment, (2) to the general policy of child psychiatric clinics to favor long-term intensive treatment by a therapeutic team (psychiatrist, psychologist, and social worker) of a relatively small number of cases, (3) to the number of behavior disorders being treated by pediatricians, family doctors, and social agencies.

TABLE 1

PRINCIPAL DIAGNOSTIC GROUPS AND THE PERCENTAGE OF CASES IN EACH GROUP

Diagnosis	%
Psychoneurotic disorders	23.5
Intoxications and addictions	4.7
Schizophrenic and paranoid disorders	44.2
Affective disorders	8.0
Mental deficiency with psychotic disorder*	4.6
Arteriosclerotic and senile disorders	9.3
Convulsive disorders	1.9
Organic disorders other than arteriosclerotic and senile	3.6

* Mental deficiency without psychosis is not considered in this study.

TABLE 2

PERCENTAGE DISTRIBUTION OF PSYCHIATRIC CASES BY AGE GROUP

Age	%
2-18	4.6
19-24	5.1
25-39	29.8
40-54	24.9
55-69	22.5
70 plus	12.8

Table 3 presents the distribution of these patients among the various types of treatment agencies, and Table 4 lists the various types of treatment used with this population.

The "no treatment" classification refers almost exclusively to chronic hospitalized patients who receive care, medical attention, but no systematic, active, or sustained treatment. The small percentage of patients either in psychoanalysis or intensive psychotherapy is of considerable interest, numbering but 5% of the total patient population.

From the many data collected in this study, we shall present here only a few significant findings that bear upon hypotheses 1, 2, and 3, dealing with the relationship of prevalence, diagnosis, and treatment to social levels. Our first hypothesis—stating that incidence of psychiatric disorders is significantly related to the social status position of the patients—may be tested by comparing the normal sample with the psychiatric sample in terms of social levels. Table 5 presents these data. It should be noted that in this and in the following comparisons, social levels I and II have been combined because of the paucity of cases ($N=19$) in level I of the psychiatric sample.

TABLE 3

PERCENTAGE DISTRIBUTION OF PATIENTS BY TREATMENT AGENCY

	%
State hospitals	66.8
Veterans' hospitals	4.2
Private hospitals	1.9
Clinics	8.1
Private practitioners' cases	19.0

TABLE 4

PERCENTAGE DISTRIBUTION OF PATIENTS BY PRINCIPAL TYPE OF TREATMENT

Principal type of treatment	%
Psychotherapy	32.0
Psychoanalysis	1.1
Analytic psychotherapy	3.8
Eclectic methods	6.0
Supportive methods	7.1
Suggestive and directive methods	6.9
Group psychotherapy	6.6
Other types of psychotherapy	.5
Organic	31.7
Electric convulsive treatment	18.7
Insulin and other	1.5
Drugs	4.3
Lobotomy	6.2
Other organic treatment	1.0
No treatment	36.3

These data show a very significant relation between social level and the prevalence of psychiatric patients according to our definition in the population of the New Haven community. With respect to the normal population, the relative number of psychiatric patients is found to be somewhat lower in the first 4 social levels, and considerably higher in level V. On the basis of these data, hypothesis 1 may be considered tenable.

Our second hypothesis postulates a significant relationship between the type of psy-

chiatric disorder in the patient population and social level. In analyzing our data, we have employed 10 diagnostic groupings or categories; here, for the sake of brevity and to suggest a basic preliminary finding, we present a table that dichotomizes neurosis and psychosis by social level.

Table 6 reveals a marked inverse relationship between the incidence of neuroses and psychoses by social level. Neuroses show a relatively high incidence in the higher social levels and a remarkably low incidence in social levels IV and V. The reverse is true for the psychoses. It may be assumed that the low percentage of neurotics in the lower levels of our patient population is due to socio-economic conditions of current psychiatric practice. The high number of psychotics cannot be explained at present. It actually may indicate an uneven distribution of psychotics in the total population.

TABLE 5

DISTRIBUTION OF CONTROL AND PSYCHIATRIC POPULATIONS BY SOCIAL LEVEL

Social level	Normal Population No.	Normal Population %	Psychiatric Population No.	Psychiatric Population %
I and II	1,284	11.3	150	7.9
III	2,500	22.0	260	13.3
IV	5,256	46.0	758	38.6
V	2,037	17.8	723	36.8
Unknown *	345	3.0	72	3.7

$\chi^2 = 281.0$ $p < .001$

* The cases whose social level could not be determined, because of paucity of data, are not used in the calculation of χ^2.

The schizophrenics, who comprise 44.2% of the patient population, and well over half (58.7%) of the psychotic group, are the largest diagnostic group in our sample. The schizophrenics are distributed among the social levels in a distorted fashion ($p<.001$); that is, there is a strong relationship between social level and the incidence of schizophrenia in our data. To indicate clearly the strength and direction of this distortion, Hollingshead constructed an Index of Prevalence, which at each social level represents differences between the potential (expected) number of schizophrenics in the normal population and the diagnosed schizophrenics in the Psychiatric Census. In this scheme, if a social level exhibits the same proportion of schizophrenia as it comprises of the general population, the Index will be 100. If the prevalence is disproportionately high, the Index is above 100. Table 7 presents these data.

The social level differences in the incidence of schizophrenia, with the systematic increases in the prevalence of this diagnosis as one progresses from level I to level V, are very striking, and strongly suggest the validity of our second hypothesis. The fact that the Index of Prevalence in social level V is 9 times as great as in combined social levels I and II is a remarkable finding. Its significance will be explored by detailed internal analysis of our data in later publications. It is possible, for example, that the higher marital and family instability at the lower social levels will relate to this finding. It is equally possible that this phenomenon may be, in part, a function of the larger proportional incidence of chronic cases in the lower social levels. It may be largely caused by existing conditions of psychiatric practice in which upper-level schizophrenics get cured and discontinue contact with psychiatry; while the lower-level patients with "no home" to go to and less adequate treatment become "chronic" in public mental hospitals. Further analysis of our data and future research on incidence

TABLE 6

DISTRIBUTION OF NEUROSES AND PSYCHOSES BY SOCIAL LEVEL (PSYCHIATRIC CENSUS)

Social level	Neuroses No.	Neuroses %	Psychoses No.	Psychoses %
I and II	98	65.3	52	34.7
III	115	44.2	145	55.8
IV	175	23.1	583	76.9
V	61	8.4	662	91.6
Total	449		1,442	

$\chi^2 = 297.8$ $p < .001$

TABLE 7

INDEX OF PREVALENCE FOR SCHIZOPHRENIA BY SOCIAL LEVEL

Social level	Normal sample No.	Normal sample %	Schizophrenia No.	Schizophrenia %	Index of Prevalence
I and II	1,284	11.6	29	3.4	28
III	2,500	22.6	83	9.8	43
IV	5,256	47.4	352	41.6	88
V	2,037	18.4	383	45.2	253
Total	11,077		847		

and prevalence of schizophrenia in the general population may answer these questions.

Summary data on our third hypothesis, that a significant relationship obtains between type of psychiatric treatment and social level, are demonstrated in Table 8.

The treatment differences between the social levels is striking and statistically significant ($p<.001$). There is a distinct progression in the percentage of cases who received no treatment (cases in custodial care) as one moves from the higher to the lower levels. Likewise, the percentage of cases receiving some form of organic treatment as the principal form of therapy tends to increase as one descends from level I and II to the lower levels. In distinction to this, the percentage of patients who receive some form of psychotherapy systematically decreases as one moves from the higher to the lower social levels. Within this latter group (patients receiving some form of psychotherapy) we find marked differences between the types of psychotherapy administered to patients at the several social levels; psychoanalysis, for example, is limited to levels I and II.

TABLE 8

PERCENTAGE DISTRIBUTION OF THE PRINCIPAL FORM OF THERAPY BY SOCIAL LEVELS

Type of treatment	Social level			
	I & II	III	IV	V
Psychotherapy	79.1	52.7	31.1	16.1
Organic	11.8	28.7	37.1	32.7
No treatment	9.1	18.6	31.8	51.2

TABLE 9

PERCENTAGE DISTRIBUTION OF PATIENTS BY SOCIAL LEVEL AND TREATMENT AGENCY

	Social level			
	I & II	III	IV	V
State hospitals	14.0	41.9	68.5	84.5
Veterans' hospitals	2.6	3.1	3.8	5.5
Private hospitals	14.7	3.1	.9	.0
Clinics	5.3	12.3	7.9	7.2
Private practitioners' cases	63.3	39.6	18.9	2.8
$\chi^2 = 871.1$		$p < .001$		

These data demonstrate a highly significant and expected relationship between social level and type of practice. Some two-thirds of all upper-level patients are treated in private practice while patients of lower social levels are concentrated in state hospitals. This latter finding is undoubtedly related to the fact that a large proportion of the cases at level V are chronic psychotics requiring long-term care.

SUMMARY

The relationship between social level and psychiatric disorders has been explored by a a demographic study of patients (*i.e.*, patients in professional contact with psychiatrists) in metropolitan New Haven, and by a background study of the stratification of a sample of the general population in the same community. Significant relationships have been found between social level and (1) prevalence of psychiatric patients according to our definition, (2) types of psychiatric disorders in the patient population, and (3) types of therapy. Our data throw some light on social stratification in current psychiatric practice; they suggest the existence of an uneven social class distribution of psychoses in the general population. The project will continue, by sociological, psychiatric, and psychological techniques, to gather facts and to explore the meaning of the preliminary findings reported in this paper. Only a study of incidence and prevalence of psychiatric disorders in the general population will solve some of the basic problems posed.

BIBLIOGRAPHY

1. Dayton, Neil A. New Facts on Mental Disorder. Springfield, Ill.: Charles C. Thomas, 1940.

2. Dollard, John, and Miller, Neal. Personality and Psychotherapy. New York: McGraw-Hill, 1950.

3. Dollard, John. Class and Caste in a Southern Town. New Haven: Yale University Press, 1937.

4. Faris, R. E. L., and Dunham, H. W. Mental Disorders in Urban Areas. Chicago: University of Chicago Press, 1939.

5. Freud, S. Introductory Lectures on Psychoanalysis, Chapter XII. London: Allen and Unwin, 1929.

6. Hollingshead, August B. Elmtown's Youth. New York: John Wiley and Sons, Inc., 1949.

7. ———. Class and kinship in a middle western community. American Sociological Review, 14: 469, Aug. 1949.

8. Hyde, Robert W., and Chisholm, Roderick M. Studies in medical sociology: III—The relation of

mental disorders to race and nationality. New Eng. J. Med. 231: 612, Nov. 2, 1944.

9. Hyde, Robert W., and Kingsley, Lowell V. Studies in medical sociology: I—The relation of mental disorders to the community socio-economic level. New Eng. J. Med., 231: 543, Oct. 19, 1944.

10. Lemkau, Paul, et at. Mental hygiene problems in an urban district. Ment. Hyg., 25: 624, 1941; 26: 100, 1942; 26: 275, 1942; 27: 279, 1943.

11. Malzberg, Benjamin. Social and Biological Aspects of Mental Disease. Utica, N. Y.: State Hospital Press, 1940.

12. Ruesch, J. Social technique, social status, and social change in illness. *In* Personality in Nature, Society, and Culture. (Kluckhohn and Murray, eds.). New York: Knopf, 1948.

13. Ruesch, J. et al. Acculturation and illness, Psychological Monographs; General and Applied, Wash., D. C., Vol. 62, No. 5, 1948.

14. Warner, W. Lloyd, and Lunt, Paul S. Yankee City Sons: Vol. I The Social Life of a Modern Community. New Haven: Yale University Press, 1941.

DISCUSSION

DR. FREDERICK WEISS (New York, N. Y.).—Earlier studies of the problem, such as Niceforo's "Anthropology of the Non-Propertied Classes," Mosse's "Illness and Social Condition," Grotjahn's "Social Pathology," suffered from 2 deficiencies: from a lack of adequate statistical data, and from a very limited understanding of the specific dynamics of a social structure as well as of a psychiatric disorder. The relationship between these 2 factors is definitely not the same as, for example, the relationship between social structure and tuberculosis. I remember the strong impression I received when I saw the first time in the study of public health that a city map arranged according to social levels presented a practically exact negative of the same map showing the incidence of tuberculosis. In the case of mental illness, the relationship is not a merely quantitative one. Psychiatric disorders are not social disorders in this simple sense; but they are social disorders in the larger sense of the modern psychodynamic conception. Neuroses and functional psychoses develop in the unhealthy emotional climate of disturbed interpersonal relationships. The individual whose growing self is weakened by lack of love, affection, and genuine acceptance feels isolated in a potentially hostile world, develops basic anxiety, becomes more and more alienated from himself, and turns to neurotic or psychotic solutions to overcome his intrapsychic and interpersonal conflicts. Thus there exists a relationship between social structure and psychiatric disorders; but it is a qualitative one, determined not by the macroscopic factor of the social level—there are Harlem neuroses and Park Avenue neuroses—but by the microscopic factor of the earliest and closest environment. Adolf Meyer's concept of mental illness as a psychobiological reaction to life situations, Halliday's broad definition of psychosocial disorder, and Horney's view of neurosis as distorted human growth, might contribute to a better insight into the relationship between social structure and psychiatric disorders.

It is the threat to vital values, vital for the safety of the specific individual, that often sets in motion the neurotic or psychotic process. This vital value *may* be economic security, but it may also be the specific value of love, prestige, power, and, particularly, of the idealized image that the person has built of himself.

The figures in Table 6 of Dr. Redlich's paper, which dichotomizes neuroses and psychoses by social level, and which shows a relatively high incidence of neuroses in the higher levels, a remarkable low in levels IV and V, and the reverse for psychoses, have to be reevaluated in the light of the fact that only very few of the neurotic patients of lower levels reach the psychiatrist, while most of the psychotic patients of this group are institutionalized.

The fact that the index of prevalence of schizophrenia in level V is 9 times as great as in level I, corresponds to the findings of Ludwig Stern (1913), who studied the ratio of schizophrenia to manic-depressive psychosis. He found the ratio to be 2.6 in workers, but only 0.7 among business owners and public officials. Tietze, Lemkau, and Cooper (1939) also found this ratio to be 2.9 among laborers, but only 1.1 among proprietors, managers, and officials. This appears to be a rather significant finding, which should be analyzed, however, not only with focus on the general social level or relative predominance of Kretschmer's schizothymic or cyclothymic personality type, but with special attention to the psychodynamic aspects of the early emotional environment.